4 9 0017

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

20248

49

TECHNICAL REVIEW MEMORANDUM

DATE: JUL 9 1993

SUBJECT: Olin Corporation/McIntosh Plant
Draft Feasibility Study Report
EPA ID No. ALD 008 188 708
Superfund Account No. TGB04D6B6

FROM: Lael H. Butler
AL/MS Unit, RCRA Permitting Section

TO: Cheryl W. Smith, RPM
South Superfund Remedial Branch

THRU: Beverly F. Williams, Chief
AL/MS Unit, RCRA Permitting Section

Olin is currently in the CERCLA track for evaluation and selection of remedial alternatives; they are in the state (ADEM) RCRA track because of a post-closure permit; and in the federal RCRA track due to the solid waste management units previously identified.

For the RCRA portion of the review, concentration was placed on OU-1 where an additional source was potentially identified (mercury-containing dense brine that seeped to the base of the Alluvial Aquifer under the Weak Brine Pond, see Figure 1-19, attached). Other RCRA concerns include the former clean closure of several solid waste management units (reference the EPA letter to Olin dated May 25, 1993).

The Draft FS Report was reviewed with respect to the concurrent actions necessary to address both CERCLA and RCRA corrective action regulations.

General Review Comments

Operable Unit 1. The findings of the remedial investigation indicate that:

- the alluvial aquifer has been contaminated and is being addressed via a RCRA post-closure permit,

- the alluvial aquifer is generally unconfined, composed primarily of sands, and varies in thickness from about 55 feet to 80 feet,

- there are potential secondary sources: the mercury-containing brine under the Weak Brine Pond area, and organic contaminants leaching from the Old (CPC) Landfill, and

- the primary constituents in the groundwater are mercury, chloroform, chlorobenzene and the dichlorobenzene isomers.

The remediation goal established for OU-1 soils is to prevent contaminant migration from the soil to the groundwater and for the groundwater is to prevent further degradation of the alluvial aquifer and restore groundwater quality).

The remediation goal established for OU-1 groundwater is to continue the existing extraction/treatment/discharge and enhance the system with horizontal wells.

Operable Unit 2. The findings from the remedial investigations indicate that sediments in the basin and the ditches are contaminated and that the groundwater is not a human health risk. Attention is then focused on the basin and wastewater ditch sediments and the aquatic and marine life.

The preliminary remediation goal established for OU-2 wastewater ditch and basin sediments is to prevent contaminant releases which would exceed surface water remediation goals or fish and game health-based standards or action levels.

Conclusions and Recommendations

Olin has indicated (via the cover letter to the Draft FS Report) that their preferred remedial alternative selections are:

OU-1 Groundwater -- Alternative C3, Extraction/Treatment and Discharge (Vertical and Horizontal Extractions Wells);

OU-1 Soils -- no alternative selected;

OU-2 Basin Sediments -- no alternative selected; and

OU-2 Wastewater Ditch Sediment -- Alternative C1, Containment (Backfill).

From the RCRA viewpoint, there is no disagreement with the remedial alternative selection for OU-1 groundwater. The supplemental initiation of institutional controls should be considered (i.e. expanding the groundwater monitoring system both on-site and off-site).

For the OU-1 Soils, Olin did not select an alternative. Since it is believed that organic contaminants in the waste and soil around the Old (CPC) Landfill is a potential continuing source, RCRA recommends that the existing cap be evaluated and if found to be deficient improvements should be initiated (i.e. Soil Alternative C, Improved Capping). Another potential source is weak-mercury containing brine which may have seeped through the Weak Brine Pond. This source is to be addressed through the OU-1 groundwater remedial action(s).

Also, while the report contains figures and rational for determining the horizontal extent of contamination, there is little mention of the vertical extent (other than in OU-1 groundwater discussions about the extent of weak-mercury containing brine). The vertical extent must be defined.

For OU-2, the investigations have centered on basin and ditch sediments and surface water. According to this report, the baseline risk assessment indicates that the sediments are not a significant pathway for human health receptors. Therefore, Olin did not select a OU-2 basin sediment alternative. RCRA recommends that Olin consider Alternative B - Institutional Actions (i.e., extension of existing fences, additional sediment and fish monitoring).

The OU-2 ditch sediments are of more concern that the basin sediments. Reported average concentrations of hexachlorobenzene and mercury in these sediments are 200 mg/kg and 20 mg/kg, respectively. Olin suggests the implementation of Alternative C1 - Containment (Backfill) [i.e., excavating a new ditch adjacent to the existing ditch and using the excavated soils as backfill]. RCRA is concerned that while this option will remove the direct exposure route for a period of time, the problem will resurface and /or potentially leach into the groundwater.

According to recent reports, the OU-2 groundwater migration pathway is not considered a significant pathway for human health receptors. RCRA recommends that EPA advise Olin that if future monitoring detects or indicates contaminant movement from the sediment into the groundwater, additional contaminant rate and extent determination will be required.

Should you have any questions, please advise.